



FILED

10/30/20
04:59 PM

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking to Examine
Electric Utility De-Energization of Power
Lines in Dangerous Conditions.

Rulemaking 18-12-005

**OPENING BRIEF OF PACIFIC GAS AND ELECTRIC
COMPANY (U 39 E) IN ORDER TO SHOW CAUSE
PHASE OF RULEMAKING 18-12-005**

ANN H. KIM
KENNETH LEE

Pacific Gas and Electric Company
77 Beale Street, B30A
San Francisco, CA 94105
Telephone: (415) 973-7467
Facsimile: (415) 973-5520
E-Mail: Ann.Kim@pge.com

BRIAN HAUCK

Jenner & Block LLP
633 West 5th Street, Suite 3600
Los Angeles, CA 90071-2054
Telephone: (213) 239-2244
Facsimile: (213) 239-5199
Email: bhauck@jenner.com

Dated: October 30, 2020

Attorneys for
PACIFIC GAS AND ELECTRIC COMPANY

TABLE OF CONTENTS

	Page
I. INTRODUCTION	1
II. BACKGROUND	4
III. PG&E ACKNOWLEDGES CHALLENGES WITH CUSTOMER NOTIFICATIONS AND WEBSITE AVAILABILITY, BUT DOES NOT BELIEVE PENALTIES ARE WARRANTED.....	6
A. PG&E’S NOTIFICATION EFFORTS DURING THE THREE PSPS EVENTS WERE REASONABLE, AND NOTIFICATION RESULTS WERE WITHIN THE RANGE CONTEMPLATED BY THE PHASE ONE GUIDELINES.....	8
1. PG&E Undertook Significant Outreach Efforts To Educate Customers About PSPS Preparedness And Collect Contact Information.	9
2. PG&E Acted Reasonably In Developing And Implementing Processes To Notify Customers Of PSPS Events.....	12
3. PG&E’s Efforts To Notify Customers Were Reasonable, And The Causes Of Missed Notifications Were Not Unreasonable Under The Guidelines.....	13
B. PG&E’S WEBSITE EXPERIENCED ACCESSIBILITY ISSUES, BUT PG&E WAS ABLE TO RECOVER THE WEBSITE QUICKLY.	17
1. PG&E Undertook Substantial Efforts To Prepare For The 2019 PSPS Events.....	19
2. PG&E Experienced Technical Issues During The October 9 PSPS Event, But Was Able To Recover The Website Quickly.....	22
3. PG&E Continued Making Additional Changes After The October 9-12 Event, And The Website Withstood Even Larger PSPS Events Later That Month.	24
4. PG&E’s Efforts To Keep Customers Informed Were Reasonable, And The Causes Of The October 9-12 Website Failure Were Not Unreasonable Under The Guidelines.....	25
C. THE RECORD DOES NOT INDICATE PROBLEMS WITH THE OTHER ISSUES WITHIN THE SCOPE OF THE PROCEEDING.....	27
1. PG&E’s Secure Data Portal Was Accessible To Its Public Safety Partners During The October 9-12 Event.	27
2. PG&E’s Online Maps Were Accurate And Available During The October 9-12 Event.	27
3. PG&E Had Sufficient Staffing At Its Contact Centers To Handle The Call Volume For The October 9-12 Event.	29

TABLE OF CONTENTS
(continued)

	Page
D. FOR THE REASONS PROVIDED ABOVE, PG&E BELIEVES THAT PENALTIES ARE NEITHER NECESSARY NOR APPROPRIATE.	30
IV. CONCLUSION.....	31

TABLE OF AUTHORITIES

Page

California Authorities

Statutes and Regulations

Public Utilities Code § 451	17
-----------------------------------	----

California Public Utilities Commission

Decisions

D.09-09-030	5
D.12-01-032	4
D.12-04-024	5
D.15-04-024	31
D.16-08-020	31
D.17-12-024	5
D.19-05-042	<i>passim</i>

Rulemaking and Orders

R.18-12-005 (Dec. 13, 2018)	1, 2, 5
Assigned Commissioner and Assigned Administrative Law Judge's Ruling Setting the Scope and Schedule of the Order to Show Cause Against Pacific Gas and Electric Company for Violations Related to the Implementation of the Public Safety Power Shutoffs in October 2019. (Dec. 23, 2019)	<i>passim</i>
Order Instituting Investigation on the Commission's Own Motion on the Late 2019 Public Safety Power Shutoff Events, I.19-11-013 (Nov. 13, 2019)	2, 4

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking to Examine
Electric Utility De-Energization of Power
Lines in Dangerous Conditions.

Rulemaking 18-12-005

**OPENING BRIEF OF PACIFIC GAS AND ELECTRIC
COMPANY (U 39 E) IN ORDER TO SHOW CAUSE
PHASE OF RULEMAKING 18-12-005**

I. INTRODUCTION

The wildfire risks facing Northern California have changed dramatically in the past several years, and have required wholly new strategies and tools for governments, communities, businesses and individuals across our state. As the effects of climate change become more pronounced, larger portions of the state are experiencing extraordinarily dry conditions, and extreme weather events are putting larger and larger areas at risk of catastrophic wildfires.¹ The magnitude of increased wildfire risks became clear to Pacific Gas and Electric Company (PG&E) in 2019, when we faced challenges that were new to the Company. While we had de-energized much smaller portions of our grid for public safety protection against wildfires in 2018, we had never had occasion to implement a wide-scale PSPS event prior to October 2019. The immense scope and scale of extreme fire weather conditions across Northern and Central California in October 2019 went beyond anything the state or the industry had ever experienced before, and necessitated an unprecedented PSPS response.

To implement the two largest PSPS events in California history in October 2019, PG&E had to develop strategies for containing the scope of de-energization, for identifying affected customers in dynamic conditions, notifying all of those customers, communicating with the public at large, assessing post-event damage quickly, and re-energizing customers and assets safely, on a scale that no utility had ever faced.

¹ Ex. PGE01 (PG&E's Opening Testimony) at 1-2, line 8 to 1-3, line 2.

The question in this Order to Show Cause phase of R. 18-12-005 is not whether the events could have been implemented better; we agree that they could have and should have. Nor is the question whether we should have learned lessons from the PSPS events of October 2019; there are clearly areas on which corrective actions were necessary. We have taken, and continue to take, responsibility for our shortcomings in the October 2019 PSPS events.² The question here is whether, on the specific issues identified in the Scoping Memo,³ the implementation of the October 2019 PSPS events so violated the law as to require the imposition of penalties through an Order to Show Cause.⁴

PG&E respectfully submits that while the record developed in this proceeding identifies areas in which we can and have improved, the evidence does not support the imposition of penalties. The Scoping Memo in the proceeding identified five primary issues:

- Missed customer notifications during all three October events;
- The availability of PG&E’s website during the October 9-12 event;
- The availability of PG&E’s Secure Data Portal during the October 9-12 event;
- The accuracy of PG&E’s online maps; and
- The sufficiency of staffing at PG&E’s contact centers during the October 9-12 event.⁵

Of these issues, we respectfully suggest that only two are materially disputed: missed customer notifications during three specific PSPS events, and the availability of the website during the October 9-12 event. With regard to the other three issues, the undisputed facts revealed no significant showing of non-compliance.

² Ex. PGE-02 (PG&E’s Rebuttal Testimony) at 4-2, lines 3-25 (recounting testimony of then-Chief Executive Officer Bill Johnson and Utility Board chair Jeff Bleich at emergency meeting of the CPUC).

³ Assigned Commissioner and Assigned Administrative Law Judge’s Ruling Setting the Scope and Schedule of the Order to Show Cause Against Pacific Gas and Electric Company for Violations Related to the Implementation of the Public Safety Power Shutoffs in October 2019, R. 18-12-005 (December 23, 2019) (“Scoping Memo”).

⁴ Order Instituting Investigation on the Commission’s Own Motion on the Late 2019 Public Safety Power Shutoff Events, I.19-11-013 (November 13, 2019) (“PSPS OII”).

⁵ Scoping Memo at 3-4.

On the issue of advance notifications, we understand that awareness of a pending de-energization is critical to a customer's ability to manage the inevitable hardships of de-energization. That is why we undertook a months-long process to educate, prepare, and support the Company's customers and communities, beginning long before the events of October 2019: educating customers about the realities of possible de-energization, updating the contact information of customers who were willing to provide it, and developing technological tools to identify and notify customers who would be affected by de-energization of any given circuit in a continually changing environment. As a result of these efforts, we successfully notified over 1.75 million customers—over 97% of the population affected by the events in question. We accomplished this while developing and improving new systems, mid-season, in an effort to narrow the scope of de-energization. To be sure, our goal is 100% notification, and we have undertaken significant efforts to enhance our notification capabilities since the events in question. But in a legal framework that recognizes 100% notification is not always possible,⁶ and in a world in which some customers decline to provide any contact information or update their contact information despite repeated requests, and in which both the weather and the configuration of the electric grid are continually changing, PG&E's inability to reach 3% of our affected customers does not merit penalties.

PG&E also recognizes that the PGE.com website is an important source of information for affected customers and communities, and we made substantial efforts to make our website a valuable source of information and to bolster its capacity for the 2019 wildfire season. Ultimately, however, the October 2019 PSPS events reached an unprecedented scale that attracted world-wide interest, and traffic to PGE.com reached unprecedented levels. While almost three million unique visitors *successfully* reached PGE.com during the three-day event,⁷ the site experienced severe performance issues on October 8 that caused some customers to

⁶ See, e.g., Decision Adopting De-Energization (Public Safety Power Shut-Off) Guidelines (Phase One Guidelines), D. 19-05-042 at A1 (May 30, 2019) at A7 (“[T]he electric investor-owned utilities must, *whenever possible*, provide advance notification to all populations potentially affected.”) (emphasis added).

⁷ Ex. PGE-01 at 4-8, lines 3-10 and Figure 4-3.

experience longer wait times or to see “site not found.”⁸ We acted promptly to address the website problems and to restore access to the website as soon as possible during the event itself.⁹ We also learned from the event and increased the site’s capacity immediately; as a result, the website experienced no issues during the larger October 26-November 1 event.

Through the events of October 2019, we learned important lessons about the nature and challenges of large-scale PSPS events, and we developed strategies for minimizing and mitigating the burdens they can impose. We are currently participating fully and openly in the PSPS OII, and we embrace the opportunities the OII provides. We have reported, on a bi-weekly basis, on the implementation of numerous actions following the 2019 PSPS events, and we meet regularly with Safety and Enforcement Division staff to discuss these efforts. We are committed to improvement. But we respectfully submit that penalties pursuant to an Order to Show Cause, in the context of unprecedented events in California or elsewhere, would serve little purpose.

II. BACKGROUND

The October 2019 PSPS events occurred in a climate that had changed dramatically, requiring significant operational changes at an unprecedented pace. First, the wildfire risk in Northern California was radically different than it had been just a few years earlier, as the potentially devastating ramifications of climate change had become increasingly apparent. As of 2012, the CPUC had described the risks in Northern California as materially different from the threat in southern parts of the state:

There is no history of catastrophic power-line fires in Northern California, and Northern California does not experience the Santa Ana winds that contribute significantly to the risk of catastrophic power-line fires in Southern California.¹⁰

⁸ Ex. PGE-01 at 4-11, lines 16-18.

⁹ Ex. PGE-01 at 4-11, line 16 to 4-13, line 8.

¹⁰ Decision Adopting Regulations to Reduce Fire Hazards Associated with Overhead Power Lines and Communication Facilities, D. 12-01-032 at 74 (January 12, 2012); *see also id.* at 166, ¶ 8.

The CPUC also provided guidance that year on the scope of San Diego Gas & Electric Company’s statutory authority to de-energize its lines to mitigate wildfire risk.¹¹ By 2019, it had become clear that “an extended period of drought, upwards of 10 years, increased fuel for fires, and unprecedented conditions” were leading to extreme weather events that required changes in how PG&E and other Northern California utilities approached these issues.¹²

As a result of the changes in environmental conditions, the percentage of electrical facilities in PG&E’s service territory that are subject to significant risk of catastrophic wildfires has increased dramatically. For example, as of 2012, only 15% of PG&E’s service area was designated as having an elevated wildfire risk on the fire-threat maps recognized by the CPUC at that time. By 2019, more than 50% of PG&E’s service area was in designated Tier 2 or Tier 3 High Fire Threat District (HFTD) areas.¹³

These changes meant that PSPS events—and particularly wide-scale PSPS events—were relatively new to Northern California in October 2019. Much of the regulatory and operational framework had been developed in a short period: The Commission had issued its first-ever statewide guidance on investor-owned utility PSPS, and PG&E experienced its first-ever PSPS event, in 2018.¹⁴ The CPUC issued its Phase One Guidelines, setting forth the agency’s guidance for PSPS implementation, on June 4, 2019,¹⁵ and PG&E experienced its first PSPS event of 2019 three days later.¹⁶ By the time of the October 2019 events, PG&E had experienced three PSPS events in 2019, affecting an average of approximately 33,000 customers per event.¹⁷

¹¹ Decision Granting Petition to Modify Decision 09-09-030 and Adopting Fire Safety Requirements for San Diego Gas & Electric Company, D. 12-04-024 (April 19, 2012).

¹² Order Instituting Rulemaking to Examine Electric Utility De-Energization of Power Lines in Dangerous Conditions, R. 18-12-005 at 1 (December 13, 2018).

¹³ See Ex. PGE-01 at 1-2, lines 20-26 (citing HFTD area maps designated in D. 17-12-024).

¹⁴ Ex. PGE-01 at 3-10, line 17 to 3-11, line 1.

¹⁵ Ex. PGE-01 at 1-3, lines 23-25.

¹⁶ Ex. PGE-01 at 2-3, lines 1-2.

¹⁷ Ex. PGE-01 at 2-3, lines 1-7.

The largest PSPS event in October 2019 was almost thirty times that size¹⁸ and, to PG&E's knowledge, larger than any utility had previously implemented, anywhere.

PG&E undertook substantial efforts to prepare for the 2019 wildfire season. Much of the work occurred prior to the Phase One Guidelines, and PG&E adapted its efforts to conform to the Phase One Guidelines when they were issued on June 4, 2019.¹⁹ As described further herein, PG&E also made significant adjustments to its strategies mid-way through the 2019 wildfire season to narrow the scope of the de-energization event and reduce the disruption and associated safety risks for its customers.²⁰ These adaptations saved hundreds of thousands of customers from de-energization; the scope of one event was reduced from approximately 1.6 million customers to 735,000 customers.²¹ However, the changes sometimes came with a cost: Instead of using the automated systems PG&E had developed to identify and notify affected customers, the Company had to perform more manual operations to identify and notify customers affected under revised, more targeted scoping mechanisms—and some customers were missed.²²

III. PG&E ACKNOWLEDGES CHALLENGES WITH CUSTOMER NOTIFICATIONS AND WEBSITE AVAILABILITY, BUT DOES NOT BELIEVE PENALTIES ARE WARRANTED.

The Scoping Memo in the OSC phase of this proceeding, which was instituted on November 12, 2019, identifies five discrete issues:

- the unavailability of PG&E's website for the October 9-12 PSPS event;²³
- the inaccuracy of PG&E's online maps for the October 9-12 PSPS event;²⁴
- the inaccessibility of PG&E's Secure Data Portal for the October 9-12 PSPS event;²⁵

¹⁸ See PGE-03 at 2.

¹⁹ D.19-05-042.

²⁰ See *infra* Part III.A.3.b.

²¹ Ex. PGE-01 at 2-8, line 1 to 2-10, line 6.

²² Ex. PGE-01 at 3-13, line 20 to 3-14, line 24.

²³ Scoping Memo at 3, Issue 1.a.

²⁴ Scoping Memo at 3, Issue 1.b.

²⁵ Scoping Memo at 3, Issue 1.c.

- the failure to provide advance notifications to certain customers generally and medical baseline customers specifically during three PSPS events (October 9-12, October 23-25, and October 26-November 1);²⁶ and
- the insufficient staffing of PG&E’s call centers during the October 9-12 PSPS event.²⁷

A sixth issue concerns the penalties, if any, to be imposed on PG&E for any proven violations of the five issues above.²⁸ Of the five substantive issues, PG&E acknowledges that there were customers who did not receive advance notifications, and that the website was unavailable during the October 9-12 event. However, for reasons set forth below, PG&E believes that the issues do not warrant penalties. With respect to the other three issues, the undisputed evidence shows no violations regarding its online maps, Secure Data Portal, and call center staffing.

The October 2019 events—the notifications, the website, and the other issues—should be considered as a whole and in context. As the Phase One Decision explained, the Commission both expected “that the utilities will make every effort to implement these guidelines in advance of the 2019 wildfire season,” and “recognize[d] that some of the[] guidelines will take additional time to fully deploy.”²⁹ The Commission acknowledged that “there is no one-size-fits-all approach for utility de-energization” and that “the utilities must be afforded some flexibility in developing and deploying their de-energization programs.”³⁰ In this context, as described below, PG&E undertook reasonable and substantial efforts to prepare for the October 2019 PSPS events and to implement the Phase One Guidelines.

²⁶ Scoping Memo at 3-4, Issues 1.d, 1.e, 2.a, 2.b, 3.a, and 3.b.

²⁷ Scoping Memo at 3, Issue 1.f.

²⁸ Scoping Memo at 4, Issue 4.

²⁹ D.19-05-042 at 66.

³⁰ D.19-05-042 at 66-67.

A. PG&E’S NOTIFICATION EFFORTS DURING THE THREE PSPS EVENTS WERE REASONABLE, AND NOTIFICATION RESULTS WERE WITHIN THE RANGE CONTEMPLATED BY THE PHASE ONE GUIDELINES.

The Scoping Memo directs PG&E to address its failure to provide advance notifications to customers generally, and to medical baseline customers specifically, during three PSPS events.³¹ Specifically, the OSC alleges the following notification failures:

- Approximately 23,000 customers, including approximately 500 Medical Baseline customers, out of the 729,000 customers affected by the October 9-12 PSPS event;
- Approximately 1,900 customers, including approximately 15 Medical Baseline customers, out of the approximately 177,000 customers affected by the October 23-25 PSPS event.
- Approximately 28,600 customers, including approximately 700 Medical Baseline customers, of the total 941,000 customers affected by the October 26-November 1 PSPS event.

The evidence in the record shows that the actual number of customers who did not receive notification was lower than the numbers included in the OSC.³²

The requirements for notifying customers of a PSPS event, including who must be notified when and how, are governed by the Phase One Guidelines.³³ The Phase One Guidelines state that “the electric investor-owned utilities must, *whenever possible*, provide advance notification to all populations potentially affected by a de-energization event.”³⁴ Notably, the

³¹ Scoping Memo at 3-4, Issues 1.d, 1.e, 2.a, 2.b, 3.a, and 3.b.

³² The actual numbers of missed notifications for each event, based on PG&E’s amended ESRB-8 reports, are as follows:

- Approximately 22,000 customers (3.0%) (including approximately 600 Medical Baseline customers) out of approximately 735,400 customers affected by the October 9–12 PSPS event.
- Approximately 2,100 customers (1.2%) (including approximately 20 Medical Baseline customers) out of approximately 178,800 customers affected by the October 23–25 PSPS event.
- Approximately 25,900 customers (2.7%) (including approximately 500 Medical Baseline customers) out of approximately 967,700 customers affected by the October 26–November 1 PSPS event.

Ex. PGE-03 at 2; Amended PG&E PSPS Report for the October 9–12, 2019 De-Energization Event at 16; Amended PG&E PSPS Report for the October 23–25, 2019 De-Energization Event at 17; Amended PG&E PSPS Report for the October 26 & 29, 2019 De-Energization Event at 14.

³³ PG&E notifies customers based on their Service Point ID (SPID), and the notification data in its testimony and other filings in this proceeding is based on customer SPID.

³⁴ D.19-05-042 at A7 (emphasis added).

Phase One Guidelines recognize that “[t]here may be times when advanced notification of a de-energization event is not possible.”³⁵ Not every missed notification is sanctionable, and the Guidelines acknowledge that missed notifications can result from “emergency conditions beyond the electric investor-owned utilities’ control.”³⁶ The question is thus not simply whether some notifications were missed, or how many; rather, the question is whether PG&E’s conduct and efforts to notify customers in late 2019 fell below a reasonable standard of care such that sanctions are warranted.

The Commission should thus consider, for example, PG&E’s efforts to prepare customers for PSPS events and to comply with the Phase One Guidelines, the reasons for the missed notifications, and PG&E’s overall performance in notifying customers during the October 2019 PSPS events. As described more fully below, PG&E’s efforts included months-long initiatives to engage and prepare customers prior to wildfire season, to build infrastructure and systems to provide individualized notifications regarding specific events, and to have a public media strategy that would keep the public informed even if individualized notifications were not always successful. Ultimately, PG&E directly notified over 97% of affected customers before they were de-energized during the October 2019 PSPS events.³⁷ A fair assessment of the facts demonstrates that PG&E’s efforts and outcomes were within the realm of the Phase One Guidelines’ requirements, and that penalties for missed notifications are neither necessary nor appropriate.

1. PG&E Undertook Significant Outreach Efforts To Educate Customers About PSPS Preparedness And Collect Contact Information.

PG&E began planning for large-scale PSPS events well in advance of the 2019 wildfire season, and developed systems and processes to educate and notify customers about PSPS events. We understand that de-energization events impose significant hardships upon customers,

³⁵ D.19-05-042 at A7.

³⁶ D.19-05-042 at A7.

³⁷ Ex. PGE-01 at 3-11, lines 22-25.

and especially Medical Baseline customers. PG&E also understands that it can best minimize or mitigate the disruptions caused by PSPS events by sharing information about what to expect and how to prepare for PSPS events generally, and by providing timely and accurate notifications for specific de-energization events. To this end, we executed a months-long outreach campaign to educate customers about PSPS events and emergency preparedness, and to collect and verify customer contact information for eventual use for direct notifications.

Between May and September 2019, PG&E used multiple communications channels to proactively distribute information about emergency preparedness, backup generation options, the Medical Baseline Program, and other topics to help customers anticipate and prepare for possible PSPS events. During that timeframe, we sent all electric customers multiple emails and/or direct mailings regarding the PSPS program, guidance on emergency preparation, and requests to update contact information.³⁸ We also sent additional, targeted information to master metered customers, Medical Baseline customers, and certain customers in areas most likely to be impacted by a PSPS event. We invited customers to customer-focused webinars and open houses throughout its service area, which were attended by thousands of customers.³⁹ By September 2019, PG&E's education and outreach campaign included over 5 million direct mail pieces and over 11 million emails to customers.⁴⁰ PG&E also shared information broadly with the public through dedicated webpages on its external-facing websites, PGE.com/wildfiresafety and PGE.com/psps.⁴¹

PG&E's outreach plan included additional and customized messaging and resources to our Medical Baseline customers. This included a campaign to publicize and increase enrollment in the Medical Baseline program, advising customers in Tier 2 and 3 HFTD areas that enrollment in the Medical Baseline program would facilitate additional notifications in connection with

³⁸ Ex. PGE-01 at 3-2, line 30 to 3-3, line 17.

³⁹ Ex. PGE-01 at 3-3, lines 18-22.

⁴⁰ Ex. PGE-01 at 3-3, lines 23-25.

⁴¹ Ex. PGE-01 at 3-4, lines 6-19.

PSPS events.⁴² We provided Medical Baseline customers specific preparedness information designed for aging populations and those who rely on power for their medical devices.⁴³

Importantly, PG&E also undertook particular efforts to obtain current contact information for its customers. Because email addresses and phone numbers are not required in order to obtain electrical service, some customers had only physical address contact information on file before 2019. Because that physical address contact information is insufficient for PSPS contact purposes, we tried to obtain current contact information for as many customers as possible. In the months leading up to the wildfire season, all customers who called a PG&E contact center were prompted to verify their contact information, resulting in over six million reminders in 2019.⁴⁴ Similarly, all electric customers who logged into a PGE.com account online were prompted to update their contact information through a pop-up window.⁴⁵

PG&E also targeted those whose contact information was incomplete. Between June and August 2019, we sent multiple emails and/or mailings to all electric customers with incomplete contact information asking for their email addresses and phone numbers for potential PSPS notifications.⁴⁶ Through these efforts, we updated contact information for over 290,000 PG&E customers in 2019, with a phone number on file for over 95% of our customers in advance of the October 2019 PSPS events.⁴⁷

PG&E recognized that these initiatives were particularly important for its Medical Baseline customers. These customers received automated calls in July 2019, inviting them to press a button and update their contact information.⁴⁸ In August we sent postcards requesting new phone numbers to all Medical Baseline customers whose phone numbers were invalid or

⁴² Ex. PGE-01 at 3-4, lines 20-31.

⁴³ Ex. PGE-01 at 3-4, line 32 to 3-5, line 7.

⁴⁴ Ex. PGE-01 at 3-5, lines 19-22

⁴⁵ Ex. PGE-01 at 3-5, lines 22-26 and Figure 3.1.

⁴⁶ Ex. PGE-01 at 3-6, lines 1-10 and Figure 3.2.

⁴⁷ Ex. PGE-01 at 3-7, lines 1-4.

⁴⁸ Ex. PGE-01 at 3-8, lines 1-11.

restricted.⁴⁹ Through these efforts, PG&E updated the contact information of approximately 14,000 Medical Baseline customers in 2019, and had a phone number on file for over 99.9% of them in advance of the October 2019 PSPS events.⁵⁰

2. PG&E Acted Reasonably In Developing And Implementing Processes To Notify Customers Of PSPS Events.

PG&E developed tools and processes to identify and notify customers in connection with specific PSPS events. Before a PSPS event, as PG&E began to evaluate whether de-energization was necessary, PG&E's meteorology team and other units within its Emergency Operations Center (EOC) worked together to identify specific electrical facilities that could require de-energization.⁵¹ That list of electrical facilities was then "translated" into a list of customers who are served by those facilities and who would require notification.⁵² This translation process was largely automated through a tool PG&E had developed over the preceding months, called the PSPS Viewer, that facilitated the complex identification processes for affected grid equipment and customers in the context of continually changing weather and grid conditions.⁵³

After identifying the customers who would be affected by a particular event, PG&E developed a multi-channel notification strategy that involved automated phone calls, text messages, and emails.⁵⁴ Notifications typically included an approximate timeline for de-energization, a phone number for PG&E's contact centers, and instructions to access to the PG&E website and Address Look Up tool for additional information.⁵⁵ PG&E also proactively pushed information to its customers and the general public through general media platforms,

⁴⁹ Ex. PGE-01 at 3-8, lines 12-14.

⁵⁰ Ex. PGE-01 at 3-8, lines 15-18.

⁵¹ Ex. PGE-01 at 3-9, lines 17-24.

⁵² Ex. PGE-01 at 3-9, lines 25-31.

⁵³ Ex. PGE-01 at 3-5, lines 19-22.

⁵⁴ Ex. PGE-01 at 3-17, lines 15-18.

⁵⁵ Ex. PGE-01 at 3-18, line 1 to 3-19, line 20.

including news briefings, news releases, interviews, and social media updates that sought to inform the public as widely as possible.⁵⁶

PG&E specifically targeted Medical Baseline customers for direct notifications, reaching out repeatedly with additional follow-up calls and text messages at hourly intervals to each Medical Baseline customer until they confirmed notification.⁵⁷ If those follow-up notifications were not acknowledged, PG&E would send a representative to the customer's residence to conduct an in-person notification.⁵⁸ If there was no response, the representative would leave an informational doorhanger for the customer, and PG&E would continue hourly notifications to the customer until contact was confirmed or the power was shut off.⁵⁹

PG&E also developed a notification process for transmission-level customers, which involved individualized and customer-specific communications.⁶⁰ Transmission-level customers were notified through transmission-specific automated notifications; direct notification by phone and/or email from a designated "Critical Infrastructure Lead" in PG&E's EOC; and/or an individualized phone and/or email from a PG&E account representative assigned to the transmission-level customer's account.⁶¹

3. PG&E's Efforts To Notify Customers Were Reasonable, And The Causes Of Missed Notifications Were Not Unreasonable Under The Guidelines.

As a result of these efforts, PG&E achieved a high rate of notification: For the first large-scale PSPS events in the Company's history, PG&E provided direct notifications to over 1.75 million customers, or over 97% of the affected population.⁶² We did miss some notifications, as

⁵⁶ Ex. PGE-01 at 3-20, line 12 to 3-21, line 4.

⁵⁷ Ex. PGE-01 at 3-19, lines 22-29.

⁵⁸ Ex. PGE-01 at 3-19, lines 29-34.

⁵⁹ Ex. PGE-01 at 3-20, lines 1-4.

⁶⁰ Ex. PGE-02 at 3-7, lines 1-13.

⁶¹ Ex. PGE-02 at 3-7, lines 1-13.

⁶² Ex. PGE-01 at 3-12, lines 1-3.

approximately 50,000 customers, or less than 3% of the affected population, were not notified before they were de-energized.⁶³

One of the greatest challenges in notifying every PSPS-affected customer before de-energization is that a PSPS event is a dynamic process: the scope of each event changes over time due to evolving weather conditions, and notifications occur based on weather forecasts that can change many times up to and during the course of a single PSPS event.⁶⁴ When weather or forecast changes occurred close in time to the start of the PSPS event, public safety concerns may have required de-energization before customers affected by the newly in-scope facilities could be identified and notified.⁶⁵ The Phase One Guidelines recognize this reality, acknowledging “there may be times when advance notice is not possible.”⁶⁶

There are additional causes for missed notifications, as reviewed below.

a. Missing Contact Information

The single biggest cause of missed direct notifications, accounting for over 20,000 and over 40% of the missed notifications during the October 2019 PSPS events, was a lack of contact information for some customers.⁶⁷ This was not for a lack of trying; as described earlier, PG&E undertook extensive efforts to collect updated contact information, and was able to update information for almost 300,000 customers and had a phone number on file for 95% of customers.⁶⁸ But not all customers responded to PG&E’s efforts—which the Phase One Guidelines explicitly recognized would be “an iterative process developed over time.”⁶⁹ Customers are not required to have contact information on file to receive electric service, and some customers may choose not to provide or update their contact information, despite repeat requests from PG&E. PG&E should not be penalized for failing to provide advance notice to

⁶³ Ex. PGE-01 at 3-12, lines 1-3; Ex. PGE-03 at 2.

⁶⁴ Ex. PGE-01 at 3-13, lines 3-21.

⁶⁵ Ex. PGE-01 at 3-13, lines 3-21.

⁶⁶ D.19-05-042 at A7.

⁶⁷ Ex. PGE-01 at 3-12, line 11 to 3-13, line 5.

⁶⁸ Ex. PGE-01 at 3-12, line 11 to 3-13, line 5.

⁶⁹ D.19-05-042 at A14.

those customers who decline to provide a way to contact them. We continue to focus significant direct outreach efforts to capture accurate and complete contact information, but our efforts in 2019 were effective, appropriate, and reasonable.

b. Efforts To Narrow Scope

Other missed notifications were the result of PG&E's efforts to narrow the scope of its events. In 2019, PG&E made a mid-season decision to revise its process to avoid de-energizing tens of thousands of additional customers during PSPS events.⁷⁰ In the lead-up to the 2019 events, PG&E had developed a de-energization strategy that used "Fire Index Areas" (FIAs) as the basic de-energization unit for PSPS scoping and decision-making. Each FIA—a unit initially established by the California Department of Forestry and Fire Protection (Cal Fire) and the U.S. Fire Service and modified to align with HFTD boundaries—would, generally speaking, be analyzed for fire risk and de-energized (or not) as a whole.⁷¹ PG&E's PSPS Viewer and related systems for notification and de-energization were developed around these units.⁷²

As PG&E approached the larger PSPS events in 2019, however, we realized that using the entire FIA as the geographic unit would likely result in de-energizing substantially more customers than necessary. Given our desire to minimize the scope of de-energization wherever it was safe to do so, we decided to transition away from de-energizing entire FIAs, and revised the process to de-energize portions of FIAs at the circuit or sub-circuit level. This mid-season adjustment would enable PG&E to reduce event scope and avoid de-energizing more customers than necessary.⁷³

The effort had major benefits for communities in PG&E's service area. For the October 9-12 PSPS event, transitioning away from the FIA methodology enabled PG&E to save hundreds of thousands of customers from de-energization.⁷⁴ But this change introduced additional

⁷⁰ Ex. PGE-01 at 3-13, line 20 to 3-14, line 14.

⁷¹ Ex. PGE-01 at 3-13, line 20 to 3-14, line 14; *see also* Ex. PGE-01 at 2-9, lines 10-17.

⁷² Ex. PGE-01 at 3-13, lines 20-31.

⁷³ Ex. PGE-01 at 3-13, line 20 to 3-14, line 14.

⁷⁴ Ex. PGE-01 at 2-9, line 1 to 2-10, line 6.

complexity into the notification process. The PSPS Viewer, as configured before the 2019 wildfire season, could no longer automatically identify all of the assets and customers to be de-energized.⁷⁵ To implement the revised process, PG&E had to develop new tracing algorithms to identify facilities and customers within the portions of FIAs in the event scope.⁷⁶ This new methodology was developed between PSPS events, and we did not have time to complete testing of these new algorithms before the October 2019 PSPS events. The result was that we missed notifications to customers downstream from affected step-down transformers.⁷⁷ However, there was nothing inherently unreasonable about PG&E's initial decision to rely on Cal Fire's FIA geographic unit; and PG&E's mid-season adjustment to narrower units was specifically designed to "minimize the . . . size of de-energization events,"⁷⁸ as the Phase One Guidelines instruct.

c. Continually Changing Conditions

The final category of challenges, accounting for approximately 3,700 missed notifications, relates to situations where customers were temporarily assigned to a different circuit than the primary circuit that usually feeds their electricity.⁷⁹ In the ordinary functioning of a dynamic grid, customers are routinely supplied by different circuits on a temporary basis, in order to maintain the customer's power when routine maintenance work or other events would otherwise disrupt service under normal configurations.⁸⁰ As a result, at the time of a PSPS event, some customers may be temporarily receiving electricity from circuits that deviate from the "standard" configuration as mapped within the PSPS Viewer.⁸¹

To address temporary grid configurations, PG&E developed a system to analyze the de-energization list to identify temporary circuit changes and their related PSPS impacts, and to

⁷⁵ Ex. PGE-01 at 3-14, lines 9-14.

⁷⁶ Ex. PGE-01 at 3-14, lines 15-24.

⁷⁷ Ex. PGE-01 at 3-14, lines 15-24.

⁷⁸ D.19-05-042 at 68.

⁷⁹ Ex. PGE-01 at 3-15, lines 8-27.

⁸⁰ Ex. PGE-01 at 3-15, lines 8-27.

⁸¹ Ex. PGE-01 at 3-15, lines 8-27.

update the customer list accordingly.⁸² However, the time-sensitive and dynamic nature of the PSPS process created challenges. When system maintenance was performed close in time to a PSPS event, the resulting abnormal configurations may not have been available to include on the de-energization list, causing some notification misses.⁸³ While PG&E has developed solutions to address this issue in 2020, our inability to perform these changes consistently during the October 2019 PSPS events did not contravene the requirement to notify affected customers “whenever possible.”⁸⁴

* * *

PG&E acted reasonably in its efforts to notify customers of de-energization events, and provided advanced notice to over 97% of affected customers. The fact that PG&E has taken lessons learned from the 2019 events and improved our notification processes for the 2020 wildfire season indicate our commitment to improved customer service and performance. Our PSPS event design and notification methods before October 2019 indicate a determined effort under a reasonable standard of care to “provide advance notification to all populations potentially affected by a de-energization event,” whenever possible.⁸⁵ The missed notifications during the unprecedented, first-of-their-kind large-scale October 2019 PSPS events are unfortunate, but they fall under the Phase One Guidelines’ recognition that “[t]here may be times when advanced notification of a de-energization event is not possible,” and those notification lapses do not merit penalties.

B. PG&E’S WEBSITE EXPERIENCED ACCESSIBILITY ISSUES, BUT PG&E WAS ABLE TO RECOVER THE WEBSITE QUICKLY.

The Scoping Memo also requires PG&E to address whether the temporary unavailability of its website during the October 9–12 PSPS event is sanctionable under Pub. Util. Code Section

⁸² Ex. PGE-01 at 3-15, line 28 to 3-16, line 6.

⁸³ Ex. PGE-01 at 3-16, lines 7-14.

⁸⁴ D.19-05-042 at A7.

⁸⁵ D.19-05-042 at A7 (emphasis added).

451, the Phase One Guidelines, and Resolution ESRB-8.⁸⁶ Of those authorities, only the Phase One Guidelines refer to utility websites. The Phase One Guidelines provide for websites to have certain specified information⁸⁷—which PG&E’s website offered—and contemplate the use of “multiple modes / channels of communication” to provide customers notice of a de-energization event.⁸⁸

PG&E’s public-facing website, PGE.com, is an important channel for those kinds of communications, and PG&E acknowledges that there were times during the October 9-12 PSPS event that users were unable to access, or had difficulty accessing, our site. PG&E has been clear from the beginning that we take full responsibility for those website accessibility issues, that those issues are not acceptable, and that they cannot happen again in the future.

The issue in this proceeding, however, is not whether the website issues were acceptable. They were not. Rather, the issue is whether PG&E’s conduct—its preparation for the October 9-12 PSPS event and its response during the event itself—fell so far below an appropriate standard of care that PG&E should be sanctioned. The standard of care, per the Phase One Guidelines, was to offer specific PSPS information on the website, and to use “multiple modes / channels of communication” to provide customers notice of a de-energization event. There is no question as to whether PG&E’s website had the required content. And as described below and elsewhere, PG&E did use multiple modes and channels of communication, from traditional media outlets to operational briefings to social media, to continue to inform the public when the website became inaccessible for a portion of the October 9-12 event.

While the accessibility issues were unfortunate and unacceptable, PG&E did do substantial work before the 2019 fire season to prepare its website for the PSPS events, and those efforts would have been sufficient for a PSPS event of a scale anywhere near the scale of events experienced previously. In addition, once the technical issues arose, PG&E worked swiftly to

⁸⁶ Scoping Memo at 3-4, Issues 1.a.

⁸⁷ D.19-05-042 at A18.

⁸⁸ D.19-05-042 at A1.

redress those issues and bring the website back online—work that intervenors in this case have described as “a remarkable achievement.”⁸⁹ PG&E took additional measures after the October 9-12 event to further strengthen the website, which proved able to handle even higher levels of traffic during the late October 2019 events. Given the context of the unprecedented fire-weather challenges of 2019, PG&E’s efforts, while imperfect, do not warrant the extreme remedy of sanctions.

1. PG&E Undertook Substantial Efforts To Prepare For The 2019 PSPS Events.

In the months leading up to the 2019 wildfire season, PG&E undertook substantial efforts to prepare its website for potential PSPS events. From a content perspective, PG&E made a number of changes to the website to better inform customers about PSPS events and the importance of preparing for those events.

- PG&E created a PSPS-focused landing page and developed a number of alerts and banners through the website to direct customers to the PSPS landing page.⁹⁰ The PSPS landing page, which was translated into multiple languages, provided information about upcoming and current outages, answers to frequently asked questions, outage preparation tips, and links to a wide variety of PSPS-related and preparedness content.⁹¹
- We posted a warning banner on almost every page of the website providing information about PSPS events and requesting that customers update their contact information;⁹² these warning banners were shown more than 8 million times leading up to the October 2019 events.⁹³
- Customers who signed into their PG&E account to pay their bills or perform some other transaction received a pop-up screen that informed them about the potential impact of a PSPS event and urged them to update their contact information;⁹⁴ this pop-up message was shown to almost 2 million customers.⁹⁵

⁸⁹ See, e.g., Ex. MGRA-01 (Mussey Grade Road Alliance Testimony) at 21, lines 18-19.

⁹⁰ Ex. PGE-01 at 4-2, lines 1-9.

⁹¹ Ex. PGE-01 at 4-2, lines 1-9.

⁹² Ex. PGE-01 at 4-2, lines 24-27.

⁹³ Ex. PGE-01 at 4-2, lines 24-27.

⁹⁴ Ex. PGE-01 at 4-2, lines 28-33.

⁹⁵ Ex. PGE-01 at 4-2, lines 28-33.

- PG&E developed a new interactive tool referred to as the “Address Look-Up Tool”⁹⁶ that allowed customers to input the address of a specific residence or business to determine whether that address was within the scope of a PSPS event.⁹⁷
- PG&E added maps, mid-season, that provided an overview of the outage area, and created a dedicated weather page with a seven-day forecast broken out by region to give customers information on the likelihood of an upcoming PSPS event.⁹⁸

In addition to these PSPS-related content improvements, PG&E also strengthened the website’s infrastructure for normal business use and in preparation for the 2019 wildfire season.

Among other things:

- PG&E ran simulation programs to evaluate the speed of the website under various loading conditions, to identify needed improvements if the website was slow or not operating in an optimal matter.⁹⁹
- PG&E developed a back-up website in the event that the main website became inaccessible. The back-up website, PGEalerts.com, was designed to provide customers with critical safety information in the event that the primary website became unavailable. The back-up system was designed to handle 100 times the level of normal traffic on the main website.¹⁰⁰
- PG&E split its servers across two data centers to protect website integrity in the event a natural disaster or other external event rendered the single data center inoperable.
- Before the 2019 PSPS events, PG&E moved the Address Look-Up Tool off PGE.com’s main database into a standby database, to speed up the application’s performance.¹⁰¹
- Immediately prior to the October 9-12 event, on October 5, 2019, PG&E deployed a new solution to improve the Address Look-Up Tool’s performance by narrowing the search feature scope within PGE.com’s database.¹⁰²

PG&E conducted performance testing on the website prior to the October 9-12 PSPS event. Like many company websites, PGE.com provided information to the general public on the public-facing portion of its website, but also provided interactive services (e.g., bill-paying)

⁹⁶ Ex. PGE-01 at 4-4, lines 1-13.

⁹⁷ Ex. PGE-01 at 4-4, lines 1-13.

⁹⁸ Ex. PGE-01 at 4-3, lines 10-16; 4-4, line 14 to 4-5, line 4.

⁹⁹ Ex. PGE-01 at 4-5, line 31 to 4-6, line 4.

¹⁰⁰ Ex. PGE-01 at 4-6, lines 5-14.

¹⁰¹ Ex. PGE-01 at 4-6, lines 15-24.

¹⁰² Ex. PGE-01 at 4-6, lines 25-34.

to PG&E customers who logged into their account. At the time, the general information available to all users was hosted on a set of “Static Content” servers. The interactive account services, on the other hand, were hosted on a separate set of servers referred to as “Your Account” servers. The Address Look-Up Tool and the maps were hosted on the Your Account servers.

While PG&E expected traffic to both the static content servers and the interactive Your Account servers during a PSPS event, PG&E had not previously experienced performance issues with the static content servers. PG&E had experienced some slowness on the Address Lookup Tool in the September PSPS event, and thus focused efforts on increasing capacity and performance of the tool before the October 9th event. Accordingly, prior to and leading up to the October 9-12 event, PG&E conducted performance testing on the Your Account servers that supported these functions.¹⁰³ That testing included both breakpoint and peak-level testing on both the Address Look-Up Tool and the maps,¹⁰⁴ and continued up until the early morning hours of October 8.¹⁰⁵

PG&E viewed its Static Content servers as less likely to experience unusual stress during a large-scale PSPS events. These Static Content servers, PG&E had noted, had generally operated at 5% or less than their total capacity in the months leading up to the October 2019 PSPS events.¹⁰⁶ Moreover, in previous, non-PSPS outages that affected similar numbers of customers as the October 9-12 event, PG&E had not experienced any large-scale website outages.¹⁰⁷ As discussed below, in hindsight, PG&E’s failure to test its Static Content servers, as it had the Your Account servers, was a mistake.

¹⁰³ Ex. PGE-02 at 4-4, lines 3-9.

¹⁰⁴ Ex. PGE-02 at 4-4, lines 3-9.

¹⁰⁵ Ex. PGE-02 at 4-4, lines 3-9.

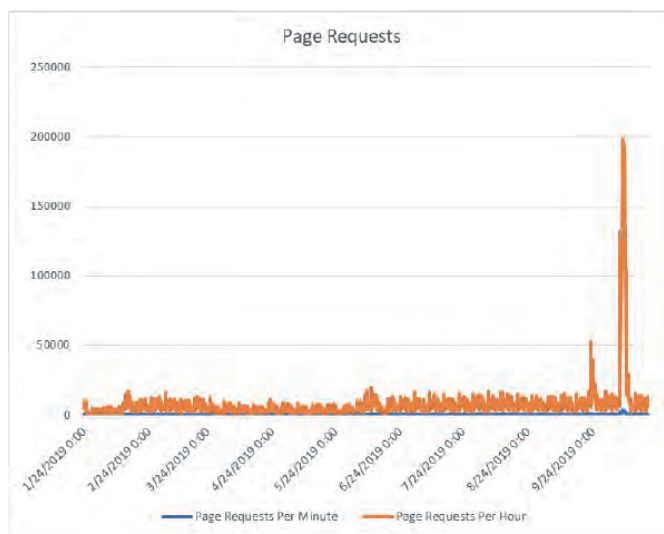
¹⁰⁶ Ex. PGE-01 at 4-7, lines 18-23.

¹⁰⁷ Ex. PGE-02 at 4-4, line 23 to 4-5, line 2 and Table 4-1.

2. PG&E Experienced Technical Issues During The October 9 PSPS Event, But Was Able To Recover The Website Quickly.

Beginning in the morning of Tuesday, October 8, PGE.com began experiencing performance issues with PGE.com, which caused some customers to experience longer wait times and receive a “site not found” error code.¹⁰⁸ These performance issues were caused by the unprecedented level of traffic that was being directed to PGE.com.¹⁰⁹ Between October 7 and 10, PGE.com’s static content servers experienced an average of 105,471 page requests per hour, more than 16 times average loading for the prior 9 months.¹¹⁰ Figure 4-4 from PG&E’s opening testimony shows the substantial increase in traffic during the October 9-12 PSPS event:¹¹¹

FIGURE 4-4
PAGE REQUESTS PER HOUR FOR JANUARY THROUGH OCTOBER 20, 2019



While PG&E acknowledges that the majority of this traffic came from PG&E’s customers, there were a number of external factors that contributed to unprecedented levels of

¹⁰⁸ Ex. PGE-01 at 4-11, lines 16-18. PG&E does not have the ability to determine the number of users that received a “site not found” error code or experienced longer wait times, or the precise times during which those users experienced those issues. But, as discussed below, PG&E was able to stabilize the website quickly and more than 1.4M unique visitors were able to access PGE.com on October 9. Ex. PGE-01 at 4-8, lines 8-11, Fig. 4-3.

¹⁰⁹ Ex. PGE-01 at 4-11, lines 11-14.

¹¹⁰ Ex. PGE-01 at 4-9, line 27 to 4-10, line 3.

¹¹¹ Ex. PGE-01 at 4-10.

traffic: automated “bot” traffic, out of state traffic, traffic from third-party sites that were continually re-incorporating PG&E content into their own sites, and map downloads. The static content servers could not handle the total level of traffic landing on our website.

When PG&E first received system alerts that indicated performance issues beginning on the morning of October 8, PG&E’s IT team responded promptly and began to work the problem, focusing initially on recovering the servers as quickly as possible.¹¹² They added memory with additional CPU capacity on the servers and made several configuration changes to optimize resource utilization and improve performance.¹¹³

Later that afternoon, PG&E’s cybersecurity team analyzed the traffic and identified distinct sources of traffic—including the third-party sites and bots, given the worldwide interest—that, while not the majority of traffic, were voluminous enough to exacerbate performance issues. PG&E temporarily blocked some of these sources’ Internet Protocol (IP) addresses to reduce overall system demand and make the site more accessible to the general public.¹¹⁴ PG&E also began the process of moving the site’s maps and downloadable files—which were also impacting server performance—from PGE.com to other systems that could better sustain their load.¹¹⁵ The IT team made several additional server configuration changes to improve server performance.¹¹⁶

PG&E continued working throughout the evening of October 8 and the morning of October 9 to further stabilize the website. Among other things, PG&E partnered with Second Watch, a PG&E vendor that supports PG&E’s web-based server tools, to analyze performance bottlenecks and implement solutions to boost functionality.¹¹⁷ PG&E also created a new

¹¹² Ex. PGE-01 at 4-11, lines 18-23.

¹¹³ Ex. PGE-01 at 4-11, lines 18-23.

¹¹⁴ Ex. PGE-01 at 4-11, lines 24-27.

¹¹⁵ Ex. PGE-01 at 4-11, line 27 to 4-12, line 2.

¹¹⁶ Ex. PGE-01 at 4-12, lines 2-3.

¹¹⁷ Ex. PGE-01 at 4-12, lines 5-9.

webpage hosted in Amazon Web Services (AWS) for its public safety partners and moved their PSPS file download source to a cloud-based infrastructure to further boost performance.¹¹⁸

PG&E also leveraged our standing partnerships with other vendors. For example, the Company worked with vendor Environmental Systems Research Institute (ESRI), an international supplier of geographic information system software and database management, to set up a temporary webpage to host PSPS Maps that showed a rough approximation of impacted areas.¹¹⁹ PG&E posted certain maps and PSPS-related content directly onto this related site, and pointed the public to that website through social media and other efforts.¹²⁰ This content redirect was completed by Wednesday afternoon, October 9, and helped redistribute the heavy site traffic load among a variety of webpages and servers.¹²¹ By the evening of October 9, the ESRI website was accessible and users were able to consistently access PSPS-content directly from that website.¹²²

3. PG&E Continued Making Additional Changes After The October 9-12 Event, And The Website Withstood Even Larger PSPS Events Later That Month.

PG&E learned important lessons during this early portion of the October 9-12 event, and sought to implement those lessons immediately. Following the October 9-12 event, PG&E continued working to improve the stability and capability of our website and its back-up systems. PG&E moved the website's three core information sources—maps of PSPS-affected areas, the PSPS Address Look-Up tool, and power restoration information—to a web-based cloud in AWS.¹²³ Moving these functions to a cloud-based server allows swift scaling of hosting capability to meet the demand when site traffic soars.¹²⁴ Indeed, within a week of the October 9-

¹¹⁸ Ex. PGE-01 at 4-12, lines 9-12.

¹¹⁹ Ex. PGE-01 at 4-12, lines 14-19.

¹²⁰ Ex. PGE-01 at 4-12, lines 19-21.

¹²¹ Ex. PGE-01 at 4-12, line 22 to 4-13, line 8.

¹²² Ex. PGE-01 at 4-12, lines 27-31.

¹²³ Ex. PGE-01 at 4-13, lines 12-15.

¹²⁴ Ex. PGE-01 at 4-13, lines 15-18.

12 event, the Company had tested all three functions to double the peak load experienced during the PSPS event's busiest moments, and the website was able to handle that level of traffic.¹²⁵

PG&E implemented a content delivery network (CDN) after the event, to reduce the load from its system and offer faster, higher quality experience to users.¹²⁶ A CDN is a large network of servers that accelerates the delivery of website content by leveraging a geographically distributed network of specialized servers.¹²⁷ PG&E has partnered with Akamai, one of the world's largest content distribution networks, spanning more than 216,000 servers in over 120 countries and within more than 1,500 networks around the world, to provide CDN services.¹²⁸

PG&E has established a policy requiring website stress-testing as part of all pre-event preparation efforts.¹²⁹ Stress-testing subjects the website to very high load volumes and monitors its performance to identify and resolve any problems before the event.¹³⁰

PG&E's revamped website performed effectively throughout the subsequent October PSPS events—one of which exceeded the size of the October 9-12 event—with no accessibility issues.

4. PG&E's Efforts To Keep Customers Informed Were Reasonable, And The Causes Of The October 9-12 Website Failure Were Not Unreasonable Under The Guidelines.

In determining whether PGE.com's inaccessibility during the October 9-12 event's unprecedented traffic merits penalties, it is important to recognize that PG&E continued to provide information to the public through other means. This is what the Phase One Guidelines required: the use of "multiple modes / channels of communication" to provide customers notice of a de-energization event.¹³¹ The public continued to get information from PG&E's news

¹²⁵ Ex. PGE-01 at 4-13, lines 18-21.

¹²⁶ Ex. PGE-01 at 4-13, lines 22-26.

¹²⁷ Ex. PGE-01 at 4-13, lines 22-26.

¹²⁸ Ex. PGE-01 at 4-13, lines 26-30.

¹²⁹ Ex. PGE-01 at 4-13, line 31 to 4-14, line 2.

¹³⁰ Ex. PGE-01 at 4-13, line 31 to 4-14, line 2.

¹³¹ D.19-05-042 at A1.

briefings, interviews, social media, and press releases, including through multi-cultural news outlets in a variety of languages.¹³² And during the time that the website channel was temporarily inaccessible, PG&E ramped up its public engagement through other channels—using Facebook, nine Twitter accounts, and Nextdoor to enhance our communications with the public; expanding our call center capacity; and increasing our daily operations briefings with local agencies.¹³³ PG&E continued to distribute critical information to the public.

Moreover, PG&E had undertaken substantial efforts to prepare its website for the 2019 PSPS events. PG&E made the required PSPS content, and more, available on the website and developed PSPS-specific webpages. PG&E regularly monitored and simulated website traffic and developed robust back-up systems in the event that the primary data center or website experienced technical issues. And PG&E performance-tested the PSPS tools expected to drive most of the website traffic during a PSPS event.

When the website experienced performance issues on October 8, PG&E took immediate and decisive action. As a result of PG&E's efforts, almost 3 million unique visitors were able to access PGE.com between October 9 and 12, and additional users visited the separate back-up website established in light of PGE.com's performance issues.¹³⁴ Thanks to these efforts, the PG&E website was fully accessible and fully functional for both customers and the general public through the subsequent PSPS events in 2019, including the even larger October 26-November 1 event.

Thus, while PG&E erred in failing to test the Static Content servers, PG&E did undertake substantial efforts to prepare for and address website performance leading up to the October 9-12 event, during the event, and after the event. Accordingly, PG&E does not believe that any sanctions should be imposed for the brief periods that the website was inaccessible.

¹³² Ex. PGE-01 at 3-20, line 14 to 3-21, line 4.

¹³³ Ex. PGE-01 at 3-21, lines 5-13.

¹³⁴ Ex. PGE-01 at 4-8, lines 8 to 10.

C. THE RECORD DOES NOT INDICATE PROBLEMS WITH THE OTHER ISSUES WITHIN THE SCOPE OF THE PROCEEDING.

Three additional issues related to the October 9-12 event were identified as meriting review in this proceeding: the accessibility of PG&E's secure data transfer portal; the accuracy of PG&E's online maps; and the sufficiency of the staffing at PG&E's call centers for the volume of customer communications.¹³⁵ After ample opportunity to develop a record on these issues, however, the facts on each of them are undisputed, and there were no problems with any of these issues that would warrant sanctions.

1. PG&E's Secure Data Portal Was Accessible To Its Public Safety Partners During The October 9-12 Event.

The first issue related to PG&E's Secure Data Portal, a tool that gives key public safety partners such as municipalities and certain state agencies private log-in access to important, event-specific data to assist in their PSPS responses.¹³⁶ While the Order to Show Cause raised the question whether "PG&E's secure data transfer portal was inaccessible [to] Public Safety Partners" during the October 9-12 event, the record evidence is uncontroverted that the Secure Data Portal remained available through the event. There is no evidence of any Secure Data Portal outage,¹³⁷ and as the Joint Local Governments—who represent one of the Secure Data Portal's primary constituencies—testified, "The secure web portal for local governments was generally accessible during the October 9 PSPS event."¹³⁸

2. PG&E's Online Maps Were Accurate And Available During The October 9-12 Event.

The Order to Show Cause also raised a question regarding the accuracy of the maps that PG&E provided during the October 9-12 event. Again, the record is undisputed on the key facts. The maps that PG&E provided were developed in accordance with standards requested by the California Governor's Office of Emergency Services (Cal OES), with involvement of the CPUC

¹³⁵ Scoping Memo at 3.

¹³⁶ See Ex. PGE-01 at 4-15, line 1 to 4-18, line 11.

¹³⁷ See Ex. PGE-01 at 4-17, line 4 to 4-18, line 11.

¹³⁸ Ex. PGE-01 at 4-15, line 1 to 4-18, line 11; Ex. PGE-02 at 4-9, lines 10-19.

and Cal Fire, and were identical in nature to the maps provided by the other California investor-owned utilities during their 2019 PSPS events. The maps were accurate reflections of the contours of the outage area. While PG&E recognizes that some parties desired more detailed, parcel-by-parcel level maps, that PG&E complied with the directives of Cal OES should not be sanctionable.

Going into the 2019 wildfire season, PG&E provided only circuit-based maps that showed the electric distribution lines that would be de-energized but did not actually show the effects that de-energization would have on the areas surrounding each circuit.¹³⁹ However, beginning in February 2018, Cal OES, Cal Fire, and the CPUC initiated a series of meetings with PG&E and its sister utilities in order to standardize a mapping format that was aligned with input and guidance from the agencies.¹⁴⁰

The result was a “generalized polygon” mapping process, developed in coordination with the agencies and the other utilities.¹⁴¹ These “generalized polygon” maps displayed the approximate geographic boundaries of PSPS events, following specifications that arose from the inter-agency discussions, and PG&E’s PSPS maps “conformed to the specifications that governed their creation and accurately depicted what Cal OES requested.”¹⁴²

Consistent with the Cal OES standards, the generalized nature of those polygon maps meant they displayed the contours of the PSPS-affected areas but did not trace the jagged, irregular, house-by-house, business-by-business status of every parcel. To reduce customer confusion, PG&E explained on its public-facing website, PG&E.com, that the maps provided “a general outline” of the planned outage area, were “not address-specific,” and did “not include the

¹³⁹ Ex. PGE-01 at 6-1, line 22 to 6-2, line 10. PG&E also continued to provide “buffered circuit maps” through the Secure Data Portal to approved public safety partners. The buffered circuit maps tracked outages on a circuit-by-circuit level, as opposed to the “generalized polygon” approach requested by Cal OES. *See* Ex. PGE-01 at 6-1, line 22 to 6-3, line 14.

¹⁴⁰ Ex. PGE-02 at 6-1, line 27 to 6-2, line 16.

¹⁴¹ Ex. PGE-01 at 6-3, line 15 to 6-5, line 4; Ex. PGE-02 at 6-1, line 21 to 6-2, line 25.

¹⁴² Ex. PGE-02 at 6-5, line 31 to 6-6, line 2.

complete and exact area(s) impacted by a PSPS.”¹⁴³ The website also encouraged customers to use the Address Look-up Tool, noting in boldface type that the Address Look-up Tool was “the most accurate information available.”¹⁴⁴ Similar information was provided to public safety partners using the Secure Data Portal to access the generalized polygon maps. For example, as the Joint Local Governments acknowledge, the “Read Me” guidance included in the Secure Data Portal describes the maps as “[g]eneralized polygons that capture a larger area in proximity to circuits. These areas can overestimate actual impact areas but can help agencies in estimating population impacts and support resource planning.”¹⁴⁵

The maps provided by the other major utilities during their PSPS events were identical in nature.¹⁴⁶ All appear to have followed the instructions of Cal OES.

3. PG&E Had Sufficient Staffing At Its Contact Centers To Handle The Call Volume For The October 9-12 Event.

Finally, the Order to Show Cause required an examination of whether PG&E had “sufficient staffing at its calls centers to handle the volume” of calls during the October 9-12 event.¹⁴⁷ Again, uncontroverted evidence shows that it did.

PG&E’s four customer contact centers are staffed with approximately 900 agents and are generally available for PG&E customers and members of the public to report emergencies, to pay bills, or to access general information about their PG&E service or accounts.¹⁴⁸ Altogether, the contact centers receive approximately 19 million calls per year, of which approximately 6.75 million are handled by a live agent, with the remainder handled through PG&E’s Interactive Voice Response (“IVR”) system.¹⁴⁹

¹⁴³ Ex. PGE-01 at 4-4, line 23 to 4-5, line 4.

¹⁴⁴ Ex. PGE-01 at 4-4, line 23 to 4-5, line 4.

¹⁴⁵ Ex. JLG-01 (Direct Testimony of Neil Bregman, Woody Baker-Cohn, and David R. Jones) at 4, line 17 to 5, line 1.

¹⁴⁶ Ex. PGE-02 at 6-5, lines 20-25 and n.10; Exs. 6-C, 6-D, and 6-E to Ex. PGE-02.

¹⁴⁷ Scoping Memo at 3.

¹⁴⁸ Ex. PGE-01 at 5-1, lines 22-23 and 5-1, line 30 to 5-2, line 2.

¹⁴⁹ Ex. PGE-01 at 5-1, line 30 to 5-2, line 2.

PG&E prepared its call centers for potential PSPS events in 2019 by forecasting staffing needs, training additional customer service representatives, conducting PSPS training exercises, and identifying ways to increase the capacity of the call centers, such as by requiring overtime and expanding operating hours.¹⁵⁰

When call volume rose during the October 9-12 event, to levels that occasionally exceeded 500% of normal call volume,¹⁵¹ PG&E implemented a number of measures to manage the increase. We opened all contact center locations, expanded their operating hours, and offered—and at times required—maximum overtime to all 900 customer service representatives. PG&E also implemented IVR strategies to prioritize PSPS calls over general service calls.¹⁵²

These efforts were generally successful, keeping “average speed of answer” (“ASA”) of calls to PG&E’s call centers generally remaining low. For example, even with the significant increase in call volume, on October 9 PG&E Call Center ASA was nine seconds for PSPS callers, five seconds on October 10 and 11, and ten seconds on October 12.¹⁵³

D. FOR THE REASONS PROVIDED ABOVE, PG&E BELIEVES THAT PENALTIES ARE NEITHER NECESSARY NOR APPROPRIATE.

The PSPS events of October 2019 were unprecedented in size and complexity. Although PG&E’s website and customer notification performance fell below our goals, we have recognized, addressed, and improved on our lapses in the ways discussed above. We have conducted a variety of formal and informal analyses and dialogues about the conduct of PSPS events, to learn from the public, our partners, and sister utilities on how we can reduce and mitigate the burdens.

To the extent any penalty is imposed, regulatory consideration must assess the severity of the offense, the conduct of the utility, the company’s resources, and the totality of the

¹⁵⁰ Ex. PGE-01 at 5-2, line 4 to 5-3, line 20.

¹⁵¹ Ex. PGE-01 at 5-10, lines 5-6.

¹⁵² Ex. PGE-01 at 5-3, line 22 to 5-6, line 5.

¹⁵³ Ex. PGE-01 at 5-8, line 26 to 5-9, line 17.

circumstances.¹⁵⁴ It must take into account that before this proceeding opened, PG&E had already credited customers over \$86 million for these issues.¹⁵⁵ It is inappropriate to levy a generalized penalty reflecting displeasure with PSPS events overall; rather, a penalty must relate to the specific events within the scope of this proceeding. There are only two issues within the scope of this proceeding on which a penalty is even arguably appropriate: the missed notifications and the unavailability of PGE.com.

With respect to the missed notifications, the evidence shows that PG&E was designing and implementing systems to provide notification in an extraordinarily dynamic process. There may be circumstances in which a 97% notification rate would be sanctionable, if the utility acted unreasonably, but this is not one of them. PG&E did what a reasonable utility would do, over months of effort. In a world in which weather changes, customers do not update contact information, grid conditions are dynamic, and PG&E makes real-time strategic shifts in order to save hundreds of thousands from de-energization, 100% notifications will seldom be possible, and we should not be penalized for failing to achieve perfection.

With respect to PGE.com during the October 9-12 event, there is little suggestion that the website would have failed during anything but the largest PSPS event in California history. PG&E spent months building its website to be a valuable source of information. And when traffic reached unprecedented levels, PG&E responded appropriately—and our improved website withstood the even larger event later that month. Accordingly, no penalty is appropriate.

IV. CONCLUSION

While PG&E's lapses in customer notification and website performance during the October 2019 PSPS events were unfortunate and fell below our goals and expectations, those

¹⁵⁴ See Decision on Fines and Remedies to be Imposed on Pacific Gas and Electric Company for Specific Violations in Connection with the Operation and Practices of its Natural Gas Transmission System Pipelines, D. 15-04-024, 2015 WL 1687684 at *50 (Cal.P.U.C., April 9, 2015); Decision Regarding Investigation of Pacific Gas and Electric Company's Gas Distribution Facilities Records, D. 16-08-020, 2016 WL 4537633 at *1 (Cal.P.U.C., August 18, 2016).

¹⁵⁵ Ex. TURN-04 (PG&E's Responses to TURN-PGE-05 (All Questions)) at 1-2.

lapses were limited in scale and duration. It is inappropriate to levy penalties upon PG&E for these lapses, particularly since they reflect temporary failures in the face of extraordinary, unprecedented fire weather challenges rather than systemic flaws in PG&E's systems and processes. PG&E began implementing improvements to these problems immediately and has continued to improve our customer service, information delivery measures, and website performance. PG&E respectfully submits that no penalty is appropriate for these 2019 problems.

Respectfully Submitted,

ANN H. KIM
KENNETH LEE

By: /s/ Ann H. Kim
ANN H. KIM

Pacific Gas and Electric Company
77 Beale Street, B30A
San Francisco, CA 94105
Telephone: (415) 973-7467
Facsimile: (415) 973-5520
E-Mail: Ann.Kim@pge.com

BRIAN HAUCK

Jenner & Block LLP
633 West 5th Street, Suite 3600
Los Angeles, CA 90071-2054
Telephone : (213) 239-2244
Facsimile: (213) 239-5199
Email: bhauck@jenner.com

Dated: October 30, 2020

Attorneys for
PACIFIC GAS AND ELECTRIC COMPANY